

ABSTRACT

A technique for prioritization of access and paging in cellular communications systems. In the downlink direction, where a single Paging Channel is configured, a plurality of queues are created corresponding to individual services or groups of services with the same priority. Page attempts are assigned to the appropriate queue according to a pre-determined service-to-queue mapping. Pages from the queues are sent on the Paging Channel in accordance with a pre-determined dequeuing algorithm.

Where multiple Paging Channels are used, page attempts are assigned to the appropriate Paging Channel according to a pre-determined service-to-Paging Channel mapping. In the uplink direction, where a single Access Channel is configured, each mobile station includes in the Access Message a parameter representing the number of consecutive unsuccessful access attempts which have been initiated by the mobile station. This information is received by the base station and used to enable/disable services according to a predetermined priority. Which services are enabled/disabled is broadcast to each mobile station in the cell as a parameter in the Access Parameters Message. Mobile stations seeking to access services which have been disabled abandon their access attempts. Where multiple Access Channels are configured, services are mapped to the Access Channels according a pre-determined service-to-Access Channel mapping. Mobile stations initiate access attempts on the Access Channels as determined by the service-to-Access Channel mapping.